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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,737

09/02/2005

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3284

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Huntington, NY 17743

03/06/2009

EXAMINER

VU, HOANG-CHUONG Q

ART UNIT

PAPER NUMBER

2419

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,737	Applicant(s) MARKERT ET AL.	
	Examiner HOANG-CHUONG Q. VU	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/30/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

The Applicants' claim foreign priority under 35 U.S.C. § 119(a)-(d), based upon Germany Patent Application 10246007.8 filed on October 02, 2002. Receipt is acknowledged and submitted papers have been placed of record in the file.

Specification

1. The abstract of the disclosure is objected to because the Abstract was taken directly from the PCT application. The Abstract needs to be commenced on a separate sheet. Correction is required. See MPEP § 608.01(b).
2. The Specification is also objected to because it does not follow the layout guidelines for a utility application.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.

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- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 10-13 are rejected under 35 U.S.C. 101 because the claims are directed to neither a method nor a system, but rather embrace or overlap two different statutory classes of invention (see MPEP 2173.05(q)).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-13 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

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Examiner Note: Since claims 1-13 fail to define the scope and boundary of the invention, for the purpose of examination, claims 1-13 are to be interpreted as best by the Examiner.

6. Claim 6-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 lines 5-6 recites "all the control units". This has no antecedent basis.

Claim 13 line 3 recites "the production group". This has no antecedent basis.

Claims 7-9 are rejected since they depend on the rejected base claim 6.

Claim 10 is rejected since the claim which claims both a system and the method of using the system is indefinite (see MPEP 2173.05(p) section II Product and Process in the Same Claim).

Claims 11-13 are rejected since they depend on the rejected base claim 10.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. **Claims 1, 3-7, 9-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Pekarske (5,146,452) in view of Annunziata et al. (4,701,630).

Regarding claim 1, Pekarske discloses a communication system having network nodes (1, 2, 3, 4, 5) of a control and/or drive network (11, 12), wherein for operating, controlling and/or regulating signals exchanged between the network nodes via a closed ring-like signal line (6, 7) **(see Fig. 5; signals are exchanged between network nodes 122, 124, 126, 128 via a closed ring-link line)**, in which one network node (2) exchanges signals with at least one further network node (1, 3) over a bidirectional signal path (10) **(see Fig. 5; network node 128 may exchange signals with network nodes 124 and 126 over a bidirectional signal path 120)**, in which at least one network node (2) has a switchover unit (8), in which the switchover unit (8) can be communicate with two further network nodes (1, 3) via two bidirectional signal paths (10) **(see Fig. 1 shows a single node includes switch 64 which comprises send and receive ports connected therein; Fig. 5 shows the communication between nodes via bidirectional path 120)**, in which the switchover unit (8) in a first switching position connects the two signal paths (10) through the network node (2) **(see Fig. 5; switch 64 in node 128 connects the two signal paths thru network node 128)**, in which the switching unit (8) in a second switching position interrupts the communication between the two signal paths and connects two signal courses (9) of at

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least one bidirectional signal path (10) to one another (**see Fig. 6; the two signal paths are interrupted and the switch in node 128 can connect two signal courses of at least one bidirectional signal path 120 to one another**), characterized in that the communication system can be configured into various networks (11, 12) via a suitable connection of the switchover units (8) of the network nodes (1, 2, 3, 4, 5); and that the networks (11, 12) have separate signal lines (6, 7) from one another (**see Fig. 6; the communication system can be configured into first network having network nodes 122, 126 and second network having network nodes 128, 124; both network have separate signal lines 120, 130**). However, Pekarske may not explicitly teach two signal paths are connected in the manner of conduction of signal. Annunziata et al. from the same field of endeavor teach a communication network for connecting terminal equipments such as printers in a ring like or closed loop (**see col. 1 lines 41-47**) having conduction path between the equipments (**see col. 1 lines 24-26, 48 or col. 2 lines 9-11**). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching known to Annunziata et al. in the system of Pekarske to connect bidirectional paths 120 in the manner of conduction. One of ordinary skill in the art would have motivated to do so to since conduction of signals between conducting members easily separated to enable a wraparound mode (see Annunziata col. 1 lines 65-68) when the communication between two signal paths is interrupted as shown in Fig. 6 of Pekarske.

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Regarding claim 3, Pekarske further teaches the communication system as recited in claim 1, characterized in that a network node (1, 2, 3, 4, 5) is connected to a control unit (23) **(Fig. 1 shows a single node connected to a control unit 12)**.

Regarding claim 4, Pekarske further teach the communication system as recited in claim 1, characterized in that each network (11, 12) has one control unit with a master function and at least one control unit with a slave function **(see col. 13-21 and Fig. 6; network node 126 in first network and network 128 in second network with a temporary master function to communicate with remaining nodes (slave function) on the loops)**.

Regarding claim 5, Pekarske further teaches the communication system as recited in claim 1, characterized in that the switchover unit (8) is switchable via a software controller **(see Fig. 1 and col. 3 lines 20-58; the switch 64 and other switches in a node is controlled via controller unit 12 with software algorithms (col. 2 lines 67-68))**.

Regarding claim 6, Pekarske further teaches the communication system as recited in claim 1, characterized in that one network (11, 12) is configured in accordance with a leading axis and the dependent following axes of a controller of a machine system; and that all the control units which execute control tasks as a function of the leading axis and all the control units that execute control tasks as a function of following axes of the leading axis are combined into one network (11, 12) **(see Fig. 6 and col. 5 lines 5-23; due to a cut in the ring, first network is configured with a temporary master 126 (leading axis) and remaining nodes 122 (following axes) to implement**

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plan where the interrupted communication channels are reconnected. The master and remaining nodes are combined into one network (first network comprising nodes 122, 126 communicate via path 130 and second network comprising nodes 128, 124 communicate via path 120)).

Regarding claim 7, Annunziata et al. further teach the communication system as recited in claim 6, characterized in that the machine system represents a printing machine (18) with a plurality of printing units (21) **(see Abstract and col. 1 lines 41-47; configuration of a communication network within offices such as a network of interconnecting printers)**. Thus, it would have been obvious to one of ordinary skill in the art to utilize machine system comprising the network of connecting printers as taught by Annunziata et al. One of ordinary skill would have motivated to do so to implement the network of printer units in an office as a closed ring like network as taught by Pekarske. The motivation for doing so is to easily manage the network and perform wraparound when a failed machine is detected.

Regarding claim 9, Pekarske further teaches the communication system as recited in claim 7, characterized in that control units (1, 2, 3) of a plurality of nodes (18, 20) are connected to one network (11, 12) and are supplied by the network with control signals **(Fig. 1 shows a control unit 12 in a single node. Fig. 6 shows nodes (with control units 12) connected to one network and are supplied by the network with control signals (col. 4 lines 28-31))**; that a control unit performs a master function for the further control units, which perform slave functions **(Fig. 6; temporary master with**

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control unit 12 (Fig. 1) performs as a master when there is link failure and other nodes receive signal from the temporary master to implement such plan).

Regarding claim 10, Pekarske further teaches a method for controlling a communication system as recited in claim 1, characterized in that a change in the configuration of the networks (11, 12) is performed by means of software commands (see col. 5 lines 34-64; **algorithm is executed to generate commands to switch to new paths. Fig. 6 shows a change in the configuration when the link fails (fiber is cut)).**

Regarding claim 11, Pekarske further teaches the method as recited in claim 10, characterized in that if a malfunction occurs upon data exchange, a change in the configuration of the network is performed in order to exclude defective signal communication and/or a defective network node or a control unit from one network (11, 12) (see col. 5 lines 5-64; **if there's a cut in the ring, the temporary masters send signal to remaining nodes to indicate the failure span and to implement the recovery or reconnect via alternate paths; when a failed event occurs, the failed segment is terminated (excluded)).**

Regarding claim 12, Pekarske further teaches the method as recited in claim 11, characterized in that the configuration of the network is performed as a function of a configuration of a plurality of nodes (see Fig. 5; network is reconfigured when there is a cut in the ring (fiber cut)), However, Pekarske fails to explicitly teach configuration of a plurality of machines in a processing group, in particular a printing machine (18).

Annunziata et al. from the same or similar field of endeavor teach configuration of a

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plurality of machines in a processing group, in particular a printing machine (18) (**see Abstract and col. 1 lines 41-47; configuration of a communication network within offices such as a network of interconnecting printers**). Thus, it would have been obvious to one of ordinary skill in the art to utilize the network of connecting printers in the teaching of Pekarske. One of ordinary skill would have motivated to do so to reconfigure printers' network when there is a failed machine occurs in the closed ring like network as taught by Pekarske. The motivation for doing so is to manage the network and perform wraparound when a failed machine is detected.

Regarding claim 13, Pekarske further teaches the method as recited in claim 12, characterized in that if a malfunction occurs in a machine of the production group, the network node which supplies the defective machine with control signals is excluded from the network (11, 12) (**see col. 5 lines 34-63; the apparatus detects network event such as a failed segment is identified. A new path is established for the traffic**).

10. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Pekarske (5,146,452) in view of Annunziata et al. (4,701,630), and further in view of Jackson et al. (7,330,661).

Regarding claim 2, Pekarske further teaches the communication system as recited in claim 1, characterized in that two network nodes (3, 4) of two networks (11, 12) are each connected to one another via two lines (9) which are embodied between the two network nodes (3, 4) (**see Fig. 5 network nodes 126, 128 are connected to one another via two lines 120**). However, Pekarske may not explicitly teach each

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mechanically connected to one another. Jackson et al. from the same or similar field of endeavor teach computer networks includes two or more devices that are mechanically connected (**see col. 1 lines 13-14**). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Jackson to connect network nodes 126, 128 of Pekarske mechanically. One of ordinary skill in the art would have motivated to so provide a way to connect devices that are in a relatively close geographical proximity (see Jackson col. 1 lines 19-21).

11. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Pekarske (5,146,452) in view of Annunziata et al. (4,701,630), and further in view of Monse et al. (7,013,328).

Regarding claim 8, Pekarske further teaches the communication system as recited in claim 7, characterized in that a control unit (1) is connected to a further ring line (14) (control unit 12 in a single node (Fig. 1) where each node connects to a ring line 120 (Fig. 5)); However, Pekarske fails to explicitly teach that the further ring line (14) is connected to drive mechanisms (13) of a printing unit (21); and that the control unit (1) controls the drive mechanisms (13) chronologically synchronously. Monse et al. from the same or similar field of endeavor teach that the further ring line (14) is connected to drive mechanisms (13) of a printing unit (21); and that the control unit (1) controls the drive mechanisms (13) chronologically synchronously (**see Abstract; drive units in network nodes (printing machines) are connected to a ring structure; drive units are controlled in an electrical drive system chronologically (master/slave principle in a ring) synchronously**). Thus, it would have been obvious

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to one of ordinary skill in the art at the time the invention was made to employ the teaching of Monse et al. in the system taught by Pekarske and Annunziata et al. to provide drive units in printing machines to be controlled in a ring like structure. One of ordinary skill in the art at the time would have motivated to do so to increase reliability and flexibility in the drive system of a printing machines network since an individual machine part or machine system can be controlled and switched off without effecting the rest of the machine (see Monse et al. col. 2 lines 24-35).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOANG-CHUONG Q. VU whose telephone number is (571) 270-3945. The examiner can normally be reached on Monday through Thursday 8:30 AM to 5:00 PM EST. and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EDAN ORGAD can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. V./ 03/01/09
Examiner, Art Unit 2419

/Edan Orgad/
Supervisory Patent Examiner, Art Unit 2419